# State of Maine
# Department of Administrative & Financial Services
# Office of Information Technology

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## Access Control Procedures for Users (AC-2, 3, 5, 6, 17, 18, & 19)

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# 1.0 Document Purpose:

These procedures identify how the State of Maine meets security requirements pertaining to account management, access enforcement, separation of duties, least privilege, remote access, wireless access, and access control for mobile devices.

# 2.0 Scope:

2.1 These procedures apply to all State of Maine employees and contractors (collectively referred to as personnel in this document) with access to:

2.1.1 Executive Branch Agency Information Assets, irrespective of location; and

2.1.2 Information Assets from other State government branches that use the State network.

# 3.0 Procedure Conflict:

If these procedures conflict with any law or union contract in effect, the terms of the existing law or contract prevail.

# 4.0 Procedures:

4.1 The following procedures serve as the base set of requirements for State of Maine Information Assets. They represent the security controls that have been established to provide an acceptable level of protection from unauthorized system access.

4.2 **Account Management (AC-2 including CE-1, CE-2, CE-3, CE-4, CE-7):**

4.2.1 OIT ensures that Information Asset accounts are identified and selected to support agency missions/business functions, in a manner that is consistent with applicable federal laws, Executive Orders, directives, policies, regulations, standards, and guidance.

4.2.1.1 OIT uses the following types of authorized user accounts:

4.2.1.1.1 Individual accounts;

4.2.1.1.2 Role-based shared accounts;

4.2.1.1.3 Group accounts; and

4.2.1.1.4 System accounts.

4.2.2 Agencies must assign gatekeepers to manage agency Information Asset account authorizations.

4.2.2.1 OIT utilizes the Numara Footprints I.T. Service Management application to manage user account requests (establish, modify, or terminate user access account).

4.2.2.2 Authorized agency personnel submit user account requests via the Footprints user request web form, providing all required information and the justification for the request.

4.2.2.2.1 The request is assigned to the appropriate OIT Information Asset owners (e.g., Computing and Infrastructure Services for Active Directory accounts, etc.) for fulfillment.

4.2.2.2.2 The OIT assignee updates the request to notify the agency when the request is fulfilled.

4.2.3 Agencies must establish conditions for group and role membership by specifying authorized users of the Information Asset, group and role membership, and access authorizations (i.e., privileges) and other attributes (as required) for each account;

4.2.3.1 Authorized agency personnel provide approval, and specify this information, in the Footprints ticket user access request to OIT.

4.2.3.2 Agencies utilize established OIT standards and Footprints tickets, to create, enable, modify, disable, and remove accounts for each account type. These procedures include the following activities:

4.2.3.2.1 Authorizing access to the Information Asset based on:

4.2.3.2.1.1 A valid access authorization;

4.2.3.2.1.2 Intended system usage; and

4.2.3.2.1.3 Other attributes as required by the organization or associated missions/business functions;

4.2.3.3 Agencies must monitor the use of agency Information Asset accounts;

4.2.3.3.1 Notifying OIT through the Footprints ticketing system:

4.2.3.3.1.1 When accounts are no longer required;

4.2.3.3.1.2 When personnel are terminated or transferred; and

4.2.3.3.1.3 When personnel Information Asset usage or need-to-know changes;

4.2.3.4 Agencies must establish a process for reissuing shared/group account credentials (if deployed) when individuals are removed from the group.

4.2.4 OIT employs the automated mechanisms that natively come with Active Directory to support the management of accounts.

4.2.5 OIT does not automatically disable temporary or service accounts after a set duration. Instead, OIT provides inactive accounts reports to agencies on a monthly basis, through the Account Managers.

4.2.6 OIT does not automatically audit account creation, modification, enabling, disabling, and removal actions. But OIT does perform all such functions upon request.

4.2.7 OIT follows role-based access for privileged administrator accounts.

4.3 **Access Enforcement (AC-3 including CE-9):**

4.3.1 Agencies must ensure that agency Information Assets enforce approved authorizations to information and system resources, in accordance with applicable access control policies, in a manner that is consistent with applicable federal laws, Executive Orders, directives, policies, regulations, standards, and guidance.

4.3.1.1 OIT requires that access to any State Information Asset must be made by authorized agency personnel.

4.3.1.1.1 Authorized agency personnel utilize the Footprints ticketing system, user request workspace, to initiate new user access requests.

4.3.1.1.2 Any change to established user access (modified access, terminated access) must be requested, via the Footprints user request workspace, by authorized agency personnel.

4.3.1.2 OIT requires that access to any State Information Asset be based upon each user's access privileges. This access may be restricted by day, date, and time, as appropriate.

4.3.1.3 For the Information Assets it supports, OIT does not release information outside of the established system boundary unless:

4.3.1.3.1 The receiving organization Information Asset or system component provides agency-defined security safeguards; and

4.3.1.3.2 The agency-defined safeguards are used to validate the appropriateness of the information designated for release.

## 4.4 **Separation of Duties (AC-5):**

4.4.1 Both the Agencies and OIT identifies any required separation of duties, for their agency Information Assets, consistent with applicable federal laws, Executive Orders, directives, policies, regulations, standards, and guidance. Examples include:

4.4.1.1 Ensuring that audit functions are not performed by personnel responsible for administering access control;

4.4.1.2 Maintaining a limited group of administrators with access based upon the users' roles and responsibilities;

4.4.1.3 Ensuring that critical mission functions and Information Asset support functions are divided among separate individuals;

4.4.1.4 Ensuring that Information Asset testing functions (e.g., user acceptance, quality assurance, information security) and production functions are divided among separate individuals or groups; and

4.4.1.5 Ensuring that an independent entity, not the business owner, system developer(s)/maintainer(s), or system administrator(s) responsible for the Information Asset, conducts information security testing of the Information Asset.

4.4.2 Both the Agencies and OIT must ensure that, where required, separation of duties of personnel are documented and that Information Asset access authorizations to support separation of duties are defined.

4.4.2.1 Agencies collaborate with the application development managers and/or account managers to implement agency-identified, required Information Asset separation of duties for OIT-managed systems.

## 4.5 **Least Privilege (AC-6 including CE-1, CE-2, CE-5, CE-9, CE-10):**

4.5.1 Both the Agencies and OIT must ensure that the principle of least privilege is employed for agency Information Assets to ensure that users

(or processes acting on behalf of users) are allowed only authorized access necessary to accomplish assigned tasks, in accordance with job duties, consistent with applicable federal laws, Executive Orders, directives, policies, regulations, standards, and guidance.

4.5.1.1 For the Information Assets that it supports, OIT employs the principle of least privilege, which allows only authorized accesses for users (or processes acting on behalf of users) necessary to accomplish assigned tasks in accordance with job duties.

4.5.1.2 OIT explicitly authorizes access to system utilities, by requiring that they only be made available to those with a legitimate business case.

4.5.1.3 OIT requires that system administration account (e.g., root access) be limited to as small a group as possible and based on the principle of least privilege.

4.5.1.4 OIT requires that any administrators first login as themselves (ordinary user) before escalating privileges to that of an administrator.

4.5.1.5 OIT implements safeguards to prevent non-privileged users of Information Assets from executing privileged functions to include disabling, circumventing, or altering implemented security safeguards/countermeasures.

4.5.2 OIT restricts privileged accounts on the Information Asset to defined personnel or roles (defined in the applicable security plan).

4.5.3 OIT audits the execution of privileged functions.

4.5.4 All OIT-supported Information Assets prevent non-privileged users from executing privileged functions, including disabling, circumventing, or altering implemented security safeguards/countermeasures.

4.6 **Remote Access (AC-17 including CE-1, CE-2, CE-3, CE-4):**

4.6.1 Both the Agencies and OIT must ensure that usage restrictions, configuration/connection requirements and implementation guidance for remote access to agency Information Assets is established and that remote access is authorized prior to allowing connections, consistent

with applicable federal laws, Executive Orders, directives, policies, regulations, standards, and guidance.

4.6.1.1 OIT requires that remote access occurs via established Virtual Private Networks (VPNs), utilizing multi-factor authentication, host verification (host operating system checker and anti-malware).

4.6.1.2 Secure tokens, assigned to specific individuals, are required for remote access. These secure tokens are issued by OIT, upon receipt of a request from authorized agency personnel.

4.6.1.3 Office 365 leases are granted for 30 days, which allow remote access by trusted devices. Each time a device connects to the internal network, the lease is renewed.

4.6.1.4 OIT monitors and controls remote access, using a secure portal with automated, standard reporting capabilities.

4.6.1.4.1 Administrative tools are available and utilized to kill rogue connections that are identified.

4.6.1.5 OIT utilizes end-to-end VPN encryption to protect the confidentiality and integrity of remote connections.

4.6.1.6 OIT utilizes two distinct, dedicated domain entry points to route all remote access.

4.6.1.7 OIT authorizes the execution of privileged commands, and access to security information, based on the role of the user, and factoring in compelling operational need.

4.6.1.7.1 Given that authorization is role-based, the user has the same privileges regardless of whether they are remote or on-premises.

4.6.1.7.2 Authorized access is documented.

4.6.1.8 OIT requires that all devices that access the State network, meet the following security safeguards:

4.6.1.8.1 up-to-date system patches;

4.6.1.8.2 current anti-malware; and

4.6.1.8.3 automatic code execution disabled.

4.7 **Wireless Access (AC-18 including CE-1):**

4.7.1 Both the Agencies and OIT must ensure that usage restrictions, configuration/connection requirements, and implementation guidance for wireless access to agency Information Assets is established and that wireless access is authorized prior to allowing connections, consistent with applicable federal laws, Executive Orders, directives, policies, regulations, standards, and guidance.

4.7.1.1 OIT requires that agencies comply with the wireless access methods provided by OIT when accessing the state network. Wireless access points are:

4.7.1.1.1 SOM AIRE: The State's secured wireless network, two-factor authentications: Certificate and Active Directory credentials;

4.7.1.1.2 PUBLIC ACCESS: Anonymous, open access. Internet only; No access to the internal Wide Area Network. Meant for Incidental Guest Usage;

4.7.1.1.3 Custom Service Set Identifier (SSID): Named Guest access available upon authorized agency request.

4.7.1.2 OIT strictly prohibits the installation of wireless access points that are not managed by OIT.

4.7.1.3 The following restrictions and access controls are integral to all wireless service:

4.7.1.3.1 Encryption protection is enabled;

4.7.1.3.2 SOM AIRE access points are placed in secure areas;

4.7.1.3.3 A firewall is implemented between public access and the entire network;

4.7.1.3.4 Organizational policy related to wireless client access configuration and use is documented by OIT;

4.7.1.3.5 Wireless intrusion/detection system(s) (WIDS/WIPS) are employed.

4.7.1.4 OIT employs compensating controls in lieu of select wireless access controls as follow:

4.7.1.4.1 Access points are not shut down when not in use, but instead set to degrade off-hours;

4.7.1.4.2 MAC Address authentication does not take place, instead AD authentication is utilized;

4.7.1.4.3 Static IP addresses are not used for client devices, instead DHCP is utilized; and

4.7.1.4.4 Wireless activity monitoring, recording, and review, is not conducted on a regular basis. Instead, OIT has overall monitoring, recording, and review that extends to wireless.

4.7.1.5 SOM AIRE wireless access is protected using authentication and encryption. These protections do not extend to PUBLIC ACCESS.

4.7.1.6 See System and Information Integrity Policy and Procedures (SI-1), Information System Monitoring (SI-4) (coming soon) for more details.

4.8 **Access Control for Mobile Devices (AC-19 including CE-5, AC-7 CE-2):**

4.8.1 Both the Agencies and OIT must ensure that usage restrictions, configuration/connection requirements, and implementation guidance for mobile device access to agency Information Assets is established and that wireless access is authorized prior to allowing connections, consistent with applicable federal laws, Executive Orders, directives, policies, regulations, standards, and guidance. Such rules apply irrespective of whether the mobile devices are issued by the State, or personally owned.

4.8.1.1 The OIT Mobile Device Policy[1] establishes the requirements for mobile device access to the state network. These requirements include, but are not limited to:

4.8.1.1.1 Authorization requirements for mobile device access to the state network;

[1] https://www.maine.gov/oit/sites/maine.gov.oit/files/inline-files/mobile-device-policy.pdf

4.8.1.1.2 Mobile device encryption requirements, to protect confidentiality and integrity, consistent with the sensitivity of the data stored;

4.8.1.1.3 Mobile device management software requirements.

4.8.1.2 Additionally, OIT:

4.8.1.2.1 Monitors for unauthorized connections of mobile devices to Information Assets;

4.8.1.2.2 Enforces requirements for the connection of mobile devices to Information Assets;

4.8.1.2.3 Issues specially configured mobile devices to individuals traveling to locations that the organization deems to be of significant risk in accordance with applicable agency and OIT policies and procedures.

## 5.0 Document History and Distribution:

| Version | Revision Log | Date |
|---|---|---|
| *Version 1.0* | *Initial Publication* | *August 30, 2019* |

Approved by: Chief Information Officer, OIT.

Legal Citation: Title 5, Chapter 163: Office of Information Technology[2].

Waiver Process: See Waiver Policy

**Distribution**

This document will be distributed to all appropriate State of Maine personnel and will be posted on the OIT website (https://www.maine.gov/oit/policies-standards).

## 6.0 Document Review:

This document is to be reviewed annually and when substantive changes are made to policies, procedures or other authoritative regulations affecting this document.

## 7.0 Records Management:

Office of Information Technology security policies, plans, and procedures fall under the *Routine Administrative Policies and Procedures and Internal Control Policies and Directives* records management categories. They will be retained for three (3) years and then destroyed in accordance with guidance provided by Maine State Archives.

[2] http://legislature.maine.gov/statutes/5/title5ch163sec0.html

Retention of these documents will be subject to any future State Archives General Schedule revisions that cover these categories.

## 8.0 Public Records Exceptions:

Under the Maine Freedom of Access Act, certain public records exceptions may limit disclosure of agency records related to information technology infrastructure and systems, as well as security plans, procedures or risk assessments. Information contained in these records may be disclosed to the Legislature or, in the case of a political or administrative subdivision, to municipal officials or board members under conditions that protect the information from further disclosure. Any aggrieved person seeking relief for an alleged violation of the FOAA may bring suit in any Superior Court in the state.

## 9.0 Definitions:

9.1 **Information Assets**: The full spectrum of all Information Technology products, including business applications, system software, development tools, utilities, appliances, etc.

9.2 **Personally Identifiable Information (PII)**: Information which can be used to distinguish or trace the identity of an individual (e.g., name, social security number, biometric records, etc.) alone, or when combined with other personal or identifying information which is linked or linkable to a specific individual (e.g., date and place of birth, mother's maiden name, etc.). Source: NIST CSRC Glossary[3]. Maine state law has a more specific definition in 10 M.R.S. §1347[4].

9.3 **Principle of Least Privilege:** A security principle where users are assigned the minimal access necessary to perform their job responsibilities. Access is granted for the shortest duration possible

9.4 **Sensitive Information**: Information that has the potential to cause great harm to an individual, government agency, or program if abused, misused, or breached. Sensitive information may include PII and is protected against unwarranted disclosure and typically carries specific criminal and civil penalties for an individual convicted of unauthorized access, disclosure, or misuse (e.g., Federal Tax, Protected Health, Criminal Justice, or Social Security information). Protection of sensitive information usually involves specific classification or legal precedents that provide special protection for legal and ethical reasons.

[3] https://csrc.nist.gov/glossary
[4] http://legislature.maine.gov/legis/statutes/10/title10sec1347.html